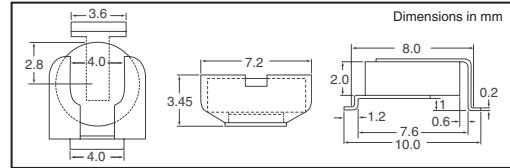




Surface Mount PTC Thermistors For Overload Protection



The component consists of a high-performance PTC ceramic disc mounted in a lead-frame, for direct soldering onto a printed-circuit board (PCB) or substrate. The ceramic is soldered to the lead-frame by a local reflow process, during which the solder layer is melted to the metallized ceramic surface using a low residue flux.

Features: • Ideal for pick-and-place circuit assembly • Low mounting height • Suitable for reflow soldering • Small ceramic diameter for faster response • Low heat transfer to substrate • Flat terminations for stable positioning and good solderability

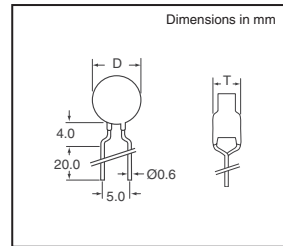
Res. @ 25°C (Ω)	Voltage Maximum (V)	Int. @		It @ 25°C	Ceramic Size Inch (mm)	Digi-Key Part No.	Cut Tape Price Each			Vishay Part No.
		25°C	70°C				1	10	50	
Telecommunication Type										
10	245	165	100	270	0.25 (6.5)	BC1568CT-ND	1.13	.77	.73	2322 661 97016
17.5	300	150	100	250	0.25 (6.5)	BC1561CT-ND	1.13	.77	.73	2322 661 97003
20	300	120	70	250	0.25 (6.5)	BC1569CT-ND	1.13	.77	.73	2322 661 97018
25	265	120	70	220	0.25 (6.5)	BC1563CT-ND	1.36	.93	.87	2322 661 97005
35	425	110	70	175	0.25 (6.5)	BC1564CT-ND	1.13	.77	.73	2322 661 97009
40	265	80	50	130	0.25 (6.5)	BC1560CT-ND	1.13	.77	.73	2322 661 97002
General Industrial Type										
3.3	24	400	—	650	0.25 (6.5)	BC1567CT-ND	1.13	.77	.73	2322 661 97013
9.4	60	150	100	300	0.25 (6.5)	BC1565CT-ND	1.13	.77	.73	2322 661 97011

Leaded PTC Thermistors For Overload Protection

These directly heated thermistors have a positive temperature coefficient and are primarily intended for overload protection. **Features:** • Switch Temperature: Ts = 140°C, (Series 2322 660 5; Ts = 120°C) • Small ratio between trip and non-trip currents • High maximum inrush current • Excellent long term behavior, also in humidity • UL approved PTCs are guaranteed to withstand severe test programs • UL file E148885 according to XGPU2 standard UL1434



Res. @ 25°C ±20% (Ω)	Int Max. @ 25°C (mA)	It Min. @ 25°C (mA)	Voltage Max. (V)	Typical øD (mm)	Dimensions - mm Maximum		Digi-Key Part No.	Price Each			Vishay Part No.
					D	T		1	10	50	
0.9	920	1380	30	12	12.5	4.0	BC2323-ND	1.11	.76	.71	PTCCL13H921DBE
50	94	145	60	4.5	5.0	4.0	BC2319-ND	.71	.49	.46	PTCCL05H940EBE
3.8	450	675	145	12	12.5	5.0	BC2322-ND	1.05	.72	.68	PTCCL13H451FBE
48	110	165	265	6.5	7.0	5.5	BC2321-ND	.81	.55	.52	PTCCL07H111HBE
56	95	143	265	4.5	5.0	5.5	BC2320-ND	.45	.31	.29	PTCCL05H950HBE
120	63	95	265	4.5	5.0	5.5	BC2318-ND	.71	.49	.46	PTCCL05H630HBE
500	28	42	265	4.5	5.0	5.5	BC2316-ND	.65	.45	.42	PTCCL05H280HBE
1200	19	29	265	4.5	5.0	5.5	BC2315-ND	.71	.49	.46	PTCCL05H190HBE



Surface Mount Linear PTC Chip Thermistors – TFPT Series

Features: • Solderable wraparound terminations • Alumina substrate base with PTC thin film element • 0603, 0805 and 1206 sizes available **Specifications:** • TCR at 25°C: 4110 ppm/K • TCR Tolerance: ±400 ppm/K • Operation Temperature Range: -55°C – 125°C • Short Time Overload: 2.5 x Maximum Working Voltage for 5 seconds



Case Size	Dimensions - mm				
	A	B	C	D	E
0603	1.60 ±0.10	0.85 ±0.10	0.45 ±0.10	0.30 ±0.20	0.30 ±0.20
0805	2.00 ±0.15	1.25 ±0.15	0.45 ±0.10	0.40 ±0.20	0.40 ±0.20
1206	3.20 ±0.15	1.60 ±0.15	0.55 ±0.10	0.50 ±0.25	0.50 ±0.25

Case Size	Resistance Values (Ω)	Tolerance	Maximum Working Voltage (VDC)†	Power Rating (mW)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel Pricing 1,000	Vishay Dale Part No.
						1	10	100			
0603	100	±5%	30	75	541-1164-1-ND	2.02	1.77	1.39	541-1164-2-ND	732.77	TFPT0603L1000JV
	1K	±0.5%	30	75	541-1165-1-ND	2.69	2.36	1.86	541-1165-2-ND	976.28	TFPT0603L1001DV
	1K	±1%	30	75	541-1166-1-ND	2.24	1.97	1.55	541-1166-2-ND	813.57	TFPT0603L1001FV
	1K	±5%	30	75	541-1198-1-ND	2.02	1.77	1.39	541-1198-2-ND	732.77	TFPT0603L1001JV
	150	±1%	30	75	541-1167-1-ND	2.24	1.97	1.55	541-1167-2-ND	813.57	TFPT0603L1500FV
	220	±1%	30	75	541-1168-1-ND	2.24	1.97	1.55	541-1168-2-ND	813.57	TFPT0603L2200FV
	330	±1%	30	75	541-1169-1-ND	2.24	1.97	1.55	541-1169-2-ND	813.57	TFPT0603L3300FV
	390	±5%	30	75	541-1170-1-ND	2.02	1.77	1.39	541-1170-2-ND	732.77	TFPT0603L3900JV
	470	±1%	30	75	541-1171-1-ND	2.24	1.97	1.55	541-1171-2-ND	813.57	TFPT0603L4700FV
	820	±1%	30	75	541-1199-1-ND	2.24	1.97	1.55	—	—	TFPT0603L8200FV
0805	100	±5%	40	100	541-1200-1-ND	1.57	1.38	1.07	541-1200-2-ND	570.06	TFPT0805L1000JV
	1K	±1%	40	100	541-1172-1-ND	2.24	1.97	1.55	541-1172-2-ND	813.57	TFPT0805L1001FV
	1K	±5%	40	100	541-1173-1-ND	2.02	1.77	1.39	541-1173-2-ND	732.77	TFPT0805L1001JV
	1.2K	±1%	40	100	541-1174-1-ND	2.24	1.97	1.55	541-1174-2-ND	813.57	TFPT0805L1201FV
	1.5K	±1%	40	100	541-1175-1-ND	2.24	1.97	1.55	541-1175-2-ND	813.57	TFPT0805L1501FV
	1.8K	±1%	40	100	541-1176-1-ND	2.24	1.97	1.55	—	—	TFPT0805L1801FV
	1.8K	±5%	40	100	541-1177-1-ND	2.02	1.77	1.39	—	—	TFPT0805L1801JV
	2.2K	±1%	40	100	541-1178-1-ND	2.24	1.97	1.55	—	—	TFPT0805L2201FV
	2.2K	±5%	40	100	541-1179-1-ND	2.02	1.77	1.39	—	—	TFPT0805L2201JV
	2.7K	±1%	40	100	541-1180-1-ND	2.24	1.97	1.55	541-1180-2-ND	813.57	TFPT0805L2701FV
	3.3K	±1%	40	100	541-1181-1-ND	2.24	1.97	1.55	541-1181-2-ND	813.57	TFPT0805L3301FV
	3.3K	±5%	40	100	541-1182-1-ND	2.02	1.77	1.39	—	—	TFPT0805L3301JV
	3.9K	±1%	40	100	541-1183-1-ND	2.24	1.97	1.55	541-1183-2-ND	813.57	TFPT0805L3901FV
	3.9K	±5%	40	100	541-1184-1-ND	2.02	1.77	1.39	—	—	TFPT0805L3901JV
	470	±1%	40	100	541-1185-1-ND	2.24	1.97	1.55	541-1185-2-ND	813.57	TFPT0805L4700FV
4.7K	±1%	40	100	541-1186-1-ND	2.24	1.97	1.55	541-1186-2-ND	813.57	TFPT0805L4701FV	
4.7K	±5%	40	100	541-1187-1-ND	2.02	1.77	1.39	541-1187-2-ND	732.77	TFPT0805L4701JV	
5K	±1%	40	100	541-1201-1-ND	2.24	1.97	1.55	541-1201-2-ND	813.57	TFPT0805L5001FV	
5K	±5%	40	100	541-1202-1-ND	2.02	1.77	1.39	541-1202-2-ND	732.77	TFPT0805L5001JV	
680	±5%	40	100	541-1188-1-ND	2.02	1.77	1.39	—	—	TFPT0805L6800JV	
1206	10K	±1%	50	125	541-1189-1-ND	2.24	1.97	1.55	541-1189-2-ND	813.57	TFPT1206L1002FV
	10K	±5%	50	125	541-1190-1-ND	2.02	1.77	1.39	541-1190-2-ND	732.77	TFPT1206L1002JV
	220	±1%	50	125	541-1191-1-ND	2.24	1.97	1.55	541-1191-2-ND	813.57	TFPT1206L2200FV
	2.2K	±5%	50	125	541-1192-1-ND	2.02	1.77	1.39	541-1192-2-ND	732.77	TFPT1206L2201JV
	3.9K	±5%	50	125	541-1193-1-ND	2.02	1.77	1.39	541-1193-2-ND	732.77	TFPT1206L3901FV
	4.7K	±1%	50	125	541-1194-1-ND	2.24	1.97	1.55	—	—	TFPT1206L4701FV
	5.6K	±5%	50	125	541-1195-1-ND	2.02	1.77	1.39	541-1195-2-ND	732.77	TFPT1206L5601JV
6.8K	±1%	50	125	541-1196-1-ND	2.24	1.97	1.55	541-1196-2-ND	813.57	TFPT1206L6801FV	
6.8K	±5%	50	125	541-1197-1-ND	2.02	1.77	1.39	541-1197-2-ND	732.77	TFPT1206L6801JV	

† Rated continuous Working Voltage is maximum working voltage or square root of the power rating times resistance value, whichever is less.

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